

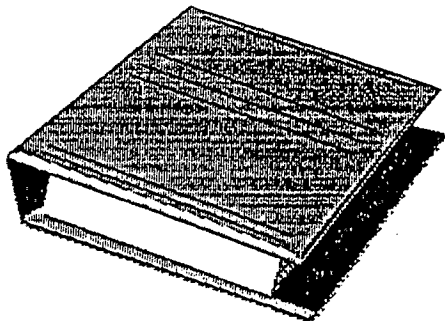
IAQ MODEL LAW TASK FORCE

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organizing session under the auspices of The Centers for Environmental Law Research, a permanent task force of the Environmental Safety Council of America, chaired by Pamela Estermann, Esq., Sive, Paget & Riesel, P.C., during such an open and previously announced session at the NY/NJ Environmental Expo and Conference in Secaucus, NJ.

Following this meeting, a general task statement was drafted for the Task Force by Christopher Spicer, C.I.H., technical director for Kaselaan & D'Angelo Associates, Inc., which was presented December 3, 1991 to a session of the Committee on Environmental Protection of the New York City Council, at the invitation of the President of the Council, Hon. Andrew Stein, who addressed a special luncheon IAQ seminar of the Environmental Safety Council.

TASK FORCE ADHERES TO COMPLETION SCHEDULE

A second organizing session was held November 13, 1991, at the

offices of the Council of State Governments in the World Trade Center in New York City under the auspices of the Indoor Air & Water Quality Council, a permanent task force of the Environmental Safety Council, co-chaired by Roger Morse, president of Entek Environmental & Technical Services.

The key national committees and panels were established at this meeting, and the Task Force resolved to complete its study, review and drafting tasks in a single year, for availability to legislators for state, municipal and other entities nationwide at the onset of the 1993 legislative year.

LEGAL AND STATUTORY REVIEW PANEL MISSION

Each panel thereafter set its own meeting dates, each of which were widely announced and publicized. Every effort was made to have differing points of view represented.

The Legal and Statutory Review Panel, chaired by Susan Rosmarin, Esq., Thelen Marrin Johnson &

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NATIONAL COALITION BEHIND IAQ MODEL LAW TASK FORCE

The IAQ Model Law Task Force is a national effort involving a large, disparate coalition of organizations and individuals in the public and private sectors under the leadership of the Indoor Air & Water Quality Council, a permanent task force of the Environmental Safety Council of America, and in collaboration with the Council of State Governments.

Its mission has been the development of useful legislative language which will be anchored to scientific and technical merit, and which, if widely adopted, can help avoid the implementation of conflicting, inconsistent or onerous laws in states, municipalities and other political subdivisions nationwide.

OPEN AND DEMOCRATIC PROCESS FOLLOWED

For the final language to have been developed as much as has been practicable with the fullest national industry and public participation, all

meetings have been conducted after prior public announcements and general mailings as to meeting dates to potentially interested parties, supported by numerous media reports, including industry publications, *The New York Times*, CBS radio, etc.

Additionally, all interested parties who might have been unable to be represented at a session or who chose not to be present have been afforded continuing opportunities at each stage of the process to submit comments in writing.

It is the goal of the Task Force that upon the completion of its work product, legislators interested in adopting its language may be assured that all those who wished to have been involved or express a point of view will have had ample opportunities to have done so prior to its introduction in any state, municipal or other assembly, and that the final version is the product of a full and open democratic process.

The IAQ Model Law Task Force was undertaken October 10, 1991 at an

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INITIAL TASK FORCE REPORTS ISSUED AT IAQ CONFERENCE

A special Public Comment session for both review panels was held April 7 in Pittsburgh during the annual convention of NAC / The Environmental Information Association.

The review panels formally completed their tasks upon the issuance of their respective reports May 1 during the first annual conference of the National Coalition on Indoor Air Quality, although the final draft of the AIHA report was at the time still pending internal review and comment and AIHA committee and Board approvals.

SPECIAL CONTRIBUTIONS ACKNOWLEDGED BY PANELS

In addition to those already named, the review panels especially acknowledge the support and contributions of Susan Dolgin, program analyst, Indoor Air Division, U.S. Environmental Protection Agency, James E. Cox, legislative director, American Society of

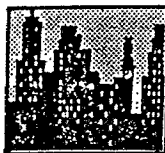
Heating, Refrigerating and Air-Conditioning Engineers, Inc.; Nevin Cohen, environmental aide to the Borough President of Manhattan; Michael O. Laddin and Douglas Whitaker, CIH, both executives employed by Entek Environmental & Technical Services, Inc.; John Svagr, CIH, of General Foods USA, representing the NYS Industrial Committee of AIHA; and Mark McHale, National Environmental Development Association.

DRAFTING PANEL INVITED COMMENTS THROUGH SUMMER

The IAQ Model Law Draft Panel, co-chaired by Mary Ellen Fise, product safety director for the Consumer Federation, and Jefferson D. Taylor, vice president, Safe Buildings Alliance, received the final reports July 1, and announced the panel would continue to accept comments in writing through September 1. All direct and allied members of the Environmental Safety Council were invited to directly volunteer to participate in the drafting process at times and places designated by the panel. (More than 100 organizations

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Bridges, was assisted in its work by the generous and able assistance of Randy Airst, Esq., and David Isabel, Esq., advanced law students from Pace University School of Law, and Mark J. Moss, legislative director for the Real Estate Board of New York.

The panel researched statutes concerning indoor air quality and related regulations. Existing state and Federal laws designed to study or control public or occupant exposure to airborne contaminants and toxic substances were reviewed to determine commonality of language and to reveal any innovative solutions to effective and feasible regulatory techniques and practices.

SCIENTIFIC AND TECHNICAL REVIEW PANEL MISSION

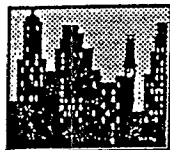
The Scientific and Technical Review Panel, co-chaired by Larry W. Johnson, P.E., manager of Health & Safety Services, Consulting Services, Inc., and John A. Tiffany, M.S., IAQ Course Director, University of Medicine & Dentistry of New Jersey, Robert Wood Johnson

Medical School, conducted their research through the American Industrial Hygiene Association.

The panel undertook a review of published literature and documents comprising the available state of the art knowledge for indoor air quality, sick building syndrome and other terms used to describe discomfort experienced by occupants of buildings with potential toxic and other reactions to furnishings, building materials, poor ventilation or inadequate maintenance as well as human causes.

The panel was especially assisted by the contributions of Edward J. Sowinski, Ph.D., DABT, CIH, of the AIHA Indoor Environmental Quality Committee, John Meagher, CIH, director of government relations for AIHA, representatives of the association's committees on law, indoor air quality, toxicology, workplace environmental levels, ventilation, product health & safety and engineering, and by the AIHA Board of Directors who formally adopted the second draft of the panel's report June 1, 1992.

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representing national or statewide constituencies comprise the Allied Membership of the Council.)

Additionally, two Public Comment sessions were scheduled August 6 in New York City and August 7 in Washington, DC, each of which were widely publicized.

The agenda for each of those Public Comment Sessions, and the press release announcing the sessions are contained in this publication's archival supplements.

FINAL MODEL LAW DRAFT ISSUANCE SCHEDULED OCT. 27

Following its work throughout the summer, the Model Law Draft Panel scheduled its report to be distributed for final review to interested parties in late September, prior to issuance October 27 in San Francisco to attendees at "IAQ 92: Environments for People", sponsored by the American Society of Heating, Refrigeration and Air-Conditioning Engineers, for which we would like to gratefully acknowledge the cooperation of the program chair,

Michael Hodgson, MD, MPH, Assoc. Professor of Medicine at the Univ. of Connecticut Health Center.

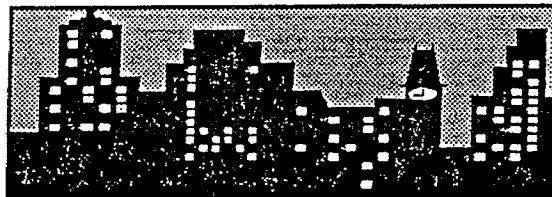
Following the presentation, the Task Force scheduled transmission of the model law to the Energy and Environmental Programs section of the Council of State Governments for consideration for its annual "Suggested Legislation" publication.

SPECIAL ANNOUNCEMENTS AND TASK FORCE NOTATIONS

1) Participants in the IAQ Model Law Task Force undertook their mission knowing that whether or not language based on technical merit became available, laws regulating indoor air quality in buildings and facilities would be introduced and adopted throughout the U.S. The Task Force is not taking a position on the adoption or non-adoption of legislation at any level.

2) IAQ Wellness [tm] voluntary protocols administered per a Memorandum of Understanding with over 100 Allied organizations are included for informational purposes.

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LEGAL & STATUTORY REVIEW EXECUTIVE SUMMARY

- > Existing and proposed legislation was reviewed at the federal, state and local levels.
- > No special focus was placed on legislation regulating asbestos, lead, radon and tobacco smoke.
- > Since a model law should be based on sound science, it could be strengthened by a study bill.
- > However, sufficient sound science currently exists for certain substantive requirements, and the adoption of 50 state study bills would be a waste of money.
- > Any study bill, therefore, should fund a central coordinator such as the Council of State Governments, working in collaboration with other resource agencies such as AIHA, NIH, NIOSH and ESCA.
- > The majority of indoor air contamination seems to involve large facilities with high concentrations of building occupants, and thus it is recommended that the model law focus on multi-story, non-industrial, non-residential buildings.
- > The primary burden of the law should be imposed on the owner, with particular emphasis on maintenance, building records and response actions. Tenants would be required to notify the building owner for certain related activities.
- > Landlords could adopt a list of products permitted or prohibited, which would be binding as if incorporated into the lease, although no liability should be accorded a landlord who failed to promulgate or police a list.
- > Lease clauses could reflect the tenants' share of costs associated with indoor air quality.
- > Existing science is insufficient to mandate building surveys and regularly scheduled inspections; nor can a list of substances be imposed.
- > The air complaint mechanisms in a New Jersey law were held to be a satisfactory standard.
- > Buildings constructed in the 70's and 80's were attempting to achieve higher energy standards then in vogue; thus retrofitting is believed to be an impracticable mandate, but tax credits are held to be a good incentive for voluntary compliance.

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FINDINGS AND RECOMMENDATIONS
OF THE LEGAL AND STATUTORY
REVIEW COMMITTEE

The Legal and Statutory Review Committee of the IAQ Model Law Task Force (the "Legal Committee") was directed to research existing and proposed state and Federal laws designed to study or control public or occupant exposure to indoor airborne contaminants and toxic substances to determine commonality of language and to reveal any innovative solutions for effective and feasible regulatory techniques and practices. To that end, the Legal Committee reviewed legislation at the federal, state and local level, both existing and proposed, to obtain the most useful provisions for recommendation to the panel. The Legal Committee did not focus on but directs the Task Force's attention to the existing legislation regulating known indoor air contaminants such as asbestos, lead, radon and tobacco smoke. The majority of the comprehensive indoor air quality legislation reviewed by the Legal Committee is proposed rather than existing. Although this confirms the need for the Model Law, it made comparisons to existing legislation difficult to draw. The Legal Committee, therefore, relied to a greater extent than anticipated on the prior experience of its members and discussion with interested persons in reaching its conclusions.

The first issue addressed by the Legal Committee was the scope of the Model Law, primarily whether it should be a study bill or a substantive bill. Everyone involved agrees that the Model Law must be based on sound science and this would be strengthened by a study bill. There is, however, sound science existing for certain substantive requirements and the adoption of a study bill by all fifty states was deemed to be a waste of money. It is recommended by the Legal Committee that the Model Law include (i) substantive regulation to the extent justified by the Scientific & Technical Review Committee (the "Scientific Committee") and (ii) provisions setting out areas requiring further study. In order to promote cost efficiency, the Legal Committee suggests that the Model Law include a provision that all IAQ studies to be funded by the separate states be coordinated by a government or outside agency such as the Environmental Safety Council, the American Industrial Hygiene Association, the National Institute of Health or the National Institute of Occupational Safety and Health. Duplicate efforts would be eliminated with corresponding savings in state resources.

The Legal Committee then focused on the application of the legislation, including the regulated parties. The possibilities considered included public or private buildings;

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residential or commercial space; one or multi-story structures; new or existing construction and tenants or owners. The majority of indoor air contamination problems which came to our attention involved large facilities with a high concentrations of occupants. Indoor air quality is affected by the activities of all building occupants, often in areas outside the immediate control of the building manager or owner. For these reasons, the Legal Committee recommends that the Model Law apply to multi-story non-industrial, non-residential buildings, both public and private (for example, office buildings and hospitals) regardless of whether new or existing construction. The Model Law should also be structured to place the burden of maintaining good indoor air quality on both the owner and the occupants.

The primary burden of the Model Law should be imposed on the owner. This would include the provisions regarding maintenance of the building and building records and initiation of response actions. The tenant would be involved with respect to recordkeeping and other compliance requirements. The Legal Committee recommends that the tenant be required to provide notice to the landlord of all renovation and redecorating projects for the landlord's review. Frequently, even small redecorating projects can affect indoor air quality. For example, new carpeting which has not been properly aerated can emit urea formaldehyde, a known contaminant.

The landlord could also be authorized to adopt a list of products, such as cleaning supplies, paints or carpeting, which are permitted or prohibited due to their effect on indoor air quality. Although not mandatory, if adopted by the landlord, such a list would be binding on the tenant as though incorporated into the lease. Because this provision is intended to promote the use of nonhazardous materials the Legal Committee recommends that the Model Law contain a provision that liability will not be imposed on the landlord for not adopting such a list or for failing to ensure that the tenants adhere to the list. Leases could also be amended to provide that, to the extent the particular tenant's activities significantly increased the measures necessary to maintain good indoor air quality, the tenant must bear the cost increase. This would parallel a standard lease clause which provides that a tenant must bear the increase in premium cost to the extent its activities increase the landlord's insurance premiums.

The Legal Committee considered a variety of substantive provisions, including mandatory building surveys and regularly scheduled inspections. It was determined that the science existing at this time is insufficient to support this type of requirement. The Legal Committee was unable to establish a list of substances which should be included in the

survey and the threshold levels at which such substances become dangerous. There is also some indication that the synergistic effect of certain substances in combination may be more toxic than the substances individually. The Legal Committee recommends that the Model Law include provisions requiring further study in this area.

The Legal Committee chose instead to go the maintenance, complaint response and recordkeeping route. The Legal Committee recommends that certain maintenance functions be required on a periodic basis. This would include, for example, cleaning HVAC filters and drain pans, checking for leaks in the system, keeping the building free of pooling liquids, comparing building component specifications with actual operations and general housekeeping requirements. The details of required maintenance can easily be established by the Scientific Committee.

It is also recommended that the complaint mechanism established in the New Jersey Indoor Air Quality Standards and Procedures for Buildings Occupied by Public Employees (the "NJ Law") be adapted for the Model Law. The Model Law should provide that an employee with a complaint regarding indoor air quality should notify his or her employer who, within five working days, must, in writing, acknowledge receipt of the complaint and outline a planned response action. The employer should also be required to forward the complaint to the building owner or manager. The response outlined in the NJ Law may include any combination of the following: a description of any remedial action already taken; an outline of any response action planned but not yet taken, with a timetable for completion; or an order for study of the problem with a timetable for completion. If the condition persists or the employer fails to respond, the employee may then file a complaint with the appropriate state agency, e.g. Department of Health or Department of Labor who shall, in turn, investigate the complaint and mandate remedial action. This method gives employees access to a complaint procedure while screening minor complaints before they reach the state agency level. The building owner also has a means of resolving problems without the involvement of enforcement agencies. The danger of such a complaint process, however, is the repeated filings of frivolous complaints which cannot be resolved but must be investigated and this should be addressed in the Model Law.

The maintenance and complaint procedures are inextricably linked to the recordkeeping requirements. The building owner or manager will be required to keep a set of building records available for a specified time period and shall provide all tenants with access to such records on reasonable notice at reasonable times. The landlord should

also, at its option, provide prospective tenants with access to such records. Market forces will create pressure on the landlord to reveal this information to serious prospective lessees without providing access to an uncomfortably large population. The recordkeeping requirement is also a way of involving tenants in the indoor air quality process. The Legal Committee recommends that the tenant be required to provide the building owner or manager with copies of all complaints received, the tenant's OSHA Hazard Communication Program, the tenant's written smoking policy, if such written policy is required by local or state law and the results of any testing performed by the tenant. This would be incorporated into the records maintained by the building owner. The records to be maintained by the building owner should include reports of any surveys or inspections performed in the building; maintenance records with respect to time, place and action taken; material safety data sheets and manufacturers specifications for new building and decorating materials; complaints received and the response action taken; complete documentation of all surveys, abatement projects and operations and maintenance activities involving asbestos, lead, radon and tobacco smoke. It is anticipated that the drafting committee will develop additional recordkeeping requirements as the drafting process proceeds.

The Legal Committee at this time does not feel qualified to recommend specific response actions and leaves the recommendation regarding indoor air quality standards to the Scientific Committee. The NJ Law incorporates the ASHRAE standards but these may not be achievable in buildings built in the 1970's and 1980's. At that time, energy conservation was the driving force and much lower ventilation standards were required. As such, the Legal Committee recommends caution in the adoption of standards that cannot be met by a large number of existing buildings.

The final issue raised was enforcement provisions, both the carrot and the stick. The Legal Committee believes that tax credits for retrofitting older buildings for improved air quality is a good incentive for compliance. The tax incentive could be expanded to cover other areas as well. Market forces may also provide incentive to the extent that workers compensation and other claims may be reduced in the face of response actions. The alternative enforcement included in the complaint process would provide a mechanism to compel compliance in those building owners for whom private activity is insufficient motivation. To supplement the complaint process, the Legal Committee recommends the filing of an annual report with the appropriate state agency which would include complaints and response actions and maintenance information or the lack of such complaints. The annual reports would provide, in addition to an enforcement function, the raw material for a

database which could be used for the study portion of the Model Law.

In conclusion, the Legal Committee recommends that the Model Law be a combined substantive and study bill focusing on maintenance and a multi-tiered complaint process to improve indoor air quality. In addition, recordkeeping would be a critical element of the process creating a situation where market forces compel compliance. The Legal Committee believes that this type of Model Law will promote improved indoor air quality with a solid scientific basis without imposing economic or operational burdens which the real estate industry cannot sustain.

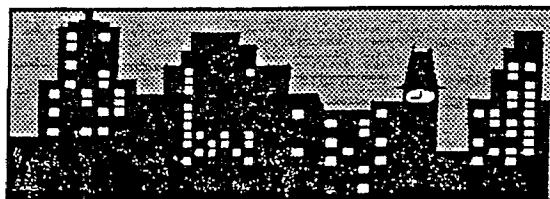
LEGAL AND STATUTORY PANEL REPORT
SUBMITTED BY:

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Chair

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SCIENTIFIC & TECHNICAL REVIEW EXECUTIVE SUMMARY

> An interdisciplinary approach is needed for the effective recognition, evaluation, and control of indoor air quality (IAQ). Industrial hygienists are uniquely suited to play a central role, along with mechanical engineers, architects, and others.

> Indoor air quality problems are typically associated with inadequate performance of HVAC systems.

> Complaints of inadequate indoor air quality are usually associated with symptoms of irritation and discomfort not clearly linked to specific chemicals and particular levels of exposure.

> Typical environmental measuring techniques and the use of traditional chemical exposure standards, such as TLVs, are usually not relevant in IAQ investigations involving irritation and discomfort.

> TLVs can have utility in IAQ as upper bound time-weighted average limits if applied with professional judgment relative to concern for specific acute and chronic

endpoints on which particular TLVs are based. The use of fractional TLVs as guides in IAQ is not scientifically warranted.

> A performance oriented management plan for maintaining acceptable IAQ is advocated. This focuses on:

- Design and performance of HVAC equipment
- General building conditions
- Determination of airborne contaminant indicators
- Effective communication concerning building occupant complaints.

> Research priorities involving multiple chemical sensitivity, standardized air sampling procedures, demonstration of technology in model buildings, and other suggestions are represented.

> Overall, maintenance of indoor air quality is not amenable to a "cookbook" specification approach. A performance-oriented, interdisciplinary program is endorsed for successful management of indoor air quality.

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